

Technical Appendix 7.1: Biodiversity Net Gain Assessment

Introduction

This technical appendix details the biodiversity net gain (BNG) assessment at the Proposed Varied Development (PVD) and the biodiversity enhancement measures required to meet a significant biodiversity net gain +10%¹. The BNG assessment has been undertaken using the SSER BNG Project Toolkit² and is a quantitative measure of the habitat impact and improvement from the PVD. A quantitative approach to biodiversity assessment can be used at construction projects to demonstrate compliance with NPF4 Policy 3, which requires demonstrable and significant improvements in biodiversity as a part of development projects. The assessment is required to evaluate whether the current Habitat Management Plan (HMP)³ for the Consented Scheme, is still appropriate to offset any residual impacts from the PVD and provide an enhancement in biodiversity value in accordance with NPF4 Policy 3 requirements. This BNG assessment should be read in conjunction with the Tangy IV Wind Farm Section 36C - EIAR **Volume 2: Chapter 7 – Ecology and Nature Conservation**.

Method

Biodiversity Net Gain Method

The biodiversity metrics currently in use in the Scottish planning system are predominantly based on a framework that was developed by the Department for Food and Rural Affairs (DEFRA) and Natural England. There are two main published biodiversity metrics based on this framework, the English Statutory Biodiversity Metric and the Scottish and Southern Energy Renewables (SSER) biodiversity project toolkit.

Metrics based on this format are first used to calculate the baseline, or pre-development value of a site. This requires several input components, some of which are manually added by the user (e.g. habitat type, habitat area and habitat condition) and some which are automatically generated (e.g. 'distinctiveness' scores) based on the habitat type. Baseline habitat condition is scored using condition assessment sheets produced by Natural England (criteria within these sheets also inform the condition score of post-development habitats). Values from each component are then multiplied together to provide a baseline 'Biodiversity Unit' (BU) value.

Once a baseline value is established, the predicted ecological value of the site post-development can be calculated, considering any expected habitat losses and planned habitat creation or restoration. Metrics also apply a series of 'risk multipliers' to any post-development habitat creation or restoration. These reflect how difficult it is to achieve the planned intervention and how long it is expected to take for the created / restored habitat to reach a specified target condition. By comparing the baseline BU value with the post-development BU value, a metric tool can be used to help understand whether nature is likely to be left in a demonstrably better state than before development (in accordance with NPF4 Policy 3).

¹ CIRIA and CIEEM C776a (2019): Biodiversity Net Gain: Good Practice Principles for Development – a practical guide (Page 97).

² SSE Renewables (2025) <https://www.sserenewables.com/sustainability/nature-positive/>

³ Wood Group (2021). Technical Appendix 8.10: Outline Habitat Management Plan

This BNG assessment at the PVD has been undertaken using the SSER BNG Toolkit which shares the same scoring system as the Statutory Metric but with specific adaptations in habitat value and application for applicability for use in a Scottish context. The differences between the Statutory Metric and SSER BNG Toolkit have been agreed in consultation with Regulators and are detailed within NatureScot Guidance (2025) on the use of existing biodiversity metrics in the Scottish planning system.⁴

Habitats Included Within the Assessment

Whilst the general approach to calculating offsetting and compensation requirements is the same between the Statutory Metric and the SSER Project Toolkit, the method for calculating an uplift in the SSER Project Toolkit differs, in so much as, compensation and enhancement are directly linked to the level of impact, rather than including all the habitats within the red line boundary (RLB). As agreed with NatureScot (2025) the guidance on the use of existing biodiversity metrics in the Scottish planning system states:

'Rather than calculating uplift as a percentage of the total baseline biodiversity value within a development's red line boundary, SSER introduces the concept of a 'biodiversity assessment boundary'. This is defined as areas which are either directly or indirectly affected by the development and areas which are being used to compensate for biodiversity impacts. Any habitats within the red line boundary that are expected to be retained at baseline habitat type and condition, with no direct or indirect impacts, are excluded from the biodiversity assessment boundary. Uplift is then calculated as a percentage of the total baseline BU value of habitats within the biodiversity assessment boundary.'

This approach is more proportional on most developments but particularly those that have a relatively small footprint compared to the size of the RLB. It ensures the mitigation hierarchy is thoroughly embedded into project decisions e.g. incentivises the avoidance of higher value habitats within the RLB as the level of compensation required is directly driven by the level of impact (which encourages avoidance and minimisation measures). A further deviation from the Statutory Metric (and to provide a more complete assessment in upland settings), is that the SSER Project Toolkit includes indirect impacts, in this case to account for potential changes in hydrology. Therefore, habitats within 10m of the infrastructure have also been included in the assessment as a precautionary approach to the BNG assessment (and in-line with the PVD ecology chapter).

The BNG assessment has been completed using the habitat loss calculations provided in **Table 7.7, Volume 2: Chapter 7 – Ecology and Nature Conservation** 'Summary of direct loss of sensitive habitats' to identify where potential losses in habitat value associated with the PVD may occur. Gains in biodiversity value have been assessed against the commitments in the Consented Schemes HMP which primarily focusses on peatland restoration (93.98ha) and native broadleaved woodland planting (6.78ha).

Limitations

The BNG assessment has been undertaken using the existing data for the Consented Scheme. No Statutory Metric habitat condition sheets have been completed as it was not a requirement during data collection for the Consented Scheme. Habitat condition has been determined based on the results of habitat surveys (field notes), peat depth and drain mapping surveys. It is noted that peatland habitats are highly modified by artificial drainage, livestock grazing and commercial forestry. Some habitats such as commercial forestry have a maximum woodland condition score of 'poor' within the metric due to a lack of species diversity, canopy structure and deadwood. Where notes on condition or a default condition scores were not available, a precautionary one-step point higher condition rating has been used e.g. if a habitat is likely in 'poor' condition a 'medium' condition category has been used as a precaution.

⁴ NatureScot (2025): Guidance on the use of existing biodiversity metrics in the Scottish planning system

Biodiversity Net Gain Result

Taking account of the proposed decreases and increases in biodiversity value associated with the construction, operation of the PVD and delivery of the Habitat Management Plan, Table 1 details the BNG assessment result. All habitats have been assessed using the default multipliers in the SSER Toolkit and time to target condition values. Note, the BNG assessment also takes account of commercial forestry lost to the PVD, in addition to open habitats (priority peatland and other sensitive habitats) which were the focus of the EIA ecology chapter.

Table 1: Biodiversity Net Gain Result (Area Habitats)

Stage	Biodiversity Units (BU)	BU Gained / Lost from Baseline	% BNG
Baseline Biodiversity Unit Value	758.42	-	-
Construction Phase (demonstrating the loss in BU Value).	600.95	-157.47	-
Post Development / Implementation of the HMP	1011.29	+252.88	+33%

The baseline biodiversity value at the Proposed Development has been calculated at 758.42BU. During construction it is anticipated that the Proposed Development will incur a decrease in area-based biodiversity value by minus 157.47BU (against the baseline value). The decrease in BU's is a result of the permanent construction footprint, the temporary loss of habitats e.g. construction compound and indirect habitat modification (out to 10m). This temporary decrease in biodiversity value is however offset by the re-instatement of temporary impacts. The creation and enhancement of habitats through the HMP including peatland restoration and native broadleaved woodland creation. These measures fully compensate for the loss in biodiversity units during construction (-157.47BU) and permanent habitat change (footprint), to deliver increases in biodiversity value by +252.88BU (**+33%**) above the baseline biodiversity value. The final biodiversity value, post development is anticipated to be 1011.29BU.

Review Against Good Practice Principles

Table 2 sets out the review of the PVD and the associated habitat improvement prescriptions against the ten BNG Good Practice Principles. Whilst the ten Good Practice Principles were originally developed to measure projects against the Statutory approach to BNG (without a dedicated Scottish equivalent) they still provide a suitable yardstick by which to measure a development project against NPF4 in Scotland. This review has identified that five of the principles have been achieved, and the five longer term principles are on target to be achieved. One of those relates to transparency; opportunities for sharing the lessons learned on the project will be sought, the others can only be achieved once the proposed habitat restoration and creation, reaches its target habitat type and condition.

Table 2: Review Against Good Practice Principles

Principle	Outcome	Status
1. Apply the mitigation hierarchy	The mitigation hierarchy has been followed through the design process undertaken as part of the planning application (EIA) and has been fully embedded in the BNG process. The mitigation hierarchy is fully embedded within the SSER approach to biodiversity net gain.	Achieved
2. Avoid losing biodiversity that be offset by gains elsewhere	Although priority peatland habitat will be impacted by the scheme, the peatlands are heavily modified from artificial drainage, livestock grazing and commercial forestry. The HMP for the PVD aims to restore both afforested deep peat and open moorland blanket bog. Forest to bog restoration has already commenced at the site with c. 63ha completed,	Achieved
3. Be inclusive and equitable	Through the design process discussions were held with the landowners to explore and agree approaches for habitat restoration. Members of the public have also been invited to public exhibition events.	Achieved
4. Address risks	The habitat reinstatement will follow recognised best practice techniques to minimise the risk of damage to the soils and habitats. A monitoring programme has been established within the HMP to capture progress and identify where adaptive management may be needed.	Achieved
5. Make a measurable NG contribution	The proposed development is projected to achieve + 33% BNG in Area-based habitats. The habitat improvements will be secured for the operational life of the wind farm via the planning consent.	On-Target
6. Achieve the best outcomes for biodiversity	The HMP sets out a detailed plan to restore degraded bog at the PVD. The HMP will also create native woodland blocks adjacent to the forestry and within a riparian corridor. The measures set out in the HMP target habitats which would naturally occur within the environment. These habitat restoration and creation measures are in line with local and national targets.	On-Target
7. Be additional	The proposed development is anticipated to deliver a +33% BNG in Area-based habitats. This is a significant BNG and will leave the site in a measurable better state. The strong BNG score is likely a result of exceeding the 1:10 ratio for priority peatlands e.g. 8.33ha of impact compensated for by 93.98ha of forest to bog and open moorland blanket bog restoration.	On-Target
8. Create a Net Gain Legacy	The HMP will ensure net gain generates long-term benefits by adaptive management and dedicated funding for long-term success as detailed within the HMP. Long term prescriptions such as peatland restoration and riparian woodland planting will deliver ecosystem benefits that extend beyond the site.	On-Target
9. Optimise sustainability	All SSER projects have key Sustainability Team members within project teams from the start so Environment and Sustainability are considered at the outset.	Achieved
10. Be Transparent	SSER are keen to ensure that approaches following this project are shared to ensure that any lessons learnt through the implementation of the HMP can be factored into future projects. Opportunities to share information on the project and its approach to BNG and the HMP will be sought.	On-Target

Conclusion

The Proposed Development has been assessed using the SSER BNG Toolkit to provide a quantitative biodiversity assessment for the scheme. The results of the biodiversity assessment demonstrate that the scheme will deliver a significant biodiversity net gain in area-based biodiversity units (+252.88.49BU) above the baseline biodiversity value, achieving a **+33% biodiversity net gain**.

The PVD is projected to realise significant biodiversity net gains (+10% or above is significant BNG). A BNG assessment at +33% above baseline provides confidence that the Proposed Development will achieve demonstrably positive effects for biodiversity, in accordance with NPF4 Policy 3. When evaluated against the ten best practice principles for BNG, it is noted that five of the criteria have been achieved and the five future criteria are on target to be achieved. Again, this is a useful measure of a project's compliance to NPF4.

Any changes to the scheme or HMP prior to construction should be assessed in the same manner as this assessment and the BNG outcome for the project updated accordingly.